



Competency Mapping Instructions:

Follow these steps in order in order to be confirmed as a “Competency Mapped” Related Instruction provider

1. Go to the PIPELINE webpage at www.dli.mn.gov/Pipeline.asp
2. On the left hand side of the page, click on the tab that corresponds to the industry you will be providing related instruction for (see below)



3. On the industry webpage that you selected, scroll down to the “PIPELINE Project validated pyramids and occupational competency summaries” and click on the “**occupation competency summary**” that you will be providing instruction for



- A tab will open on your browser that contains the occupation competency materials for the selected occupation. The new tab will look similar to this (see below)

MINNESOTA PIPELINE PROJECT

PRIVATE INVESTMENT, PUBLIC EDUCATION
LABOR AND INDUSTRY EXPERIENCE

Mechatronics – Mechatronics Technicians require electrical, mechanical and computer skills necessary to work on complex systems found in manufacturing environments. The work includes basic electricity, fluid mechanics, mechanical drives, instrumentation, motor control and task specific to electrical, mechanical, and control specialties. The skills involved include industrial maintenance and manufacturing including assembly, testing, startup, troubleshooting, repair and upgrades of machinery and associated control systems.

Industry-Sector Technical Competencies

PLC

- Motor Controls – Understand industrial motor control principles including installation, maintenance, and repair principles
- PLC systems - Understand the functions and components of PLC systems in order to

- Scroll down until you find the sheet that states your related instructions occupational “Competency Training Plan” (see below)

Mechatronics Occupational Competency Training Plan				
<i>Related Instruction means an organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's trade of occupation, or industrial courses or, when of equivalent value, by correspondence, electronic media, or other forms or self-study approved by the commissioner.</i>				
	Course	Course Description	Credit/Non-Credit	Hours Spent on Competency
PLCs: <ul style="list-style-type: none"> • Motor Controls • PLC Systems • Hydraulic Systems • Drivers • Schematics 				
Mechanical: <ul style="list-style-type: none"> • Basic Machining • Hand Tools • Fluid Power • Power Transmission • Blueprint Reading • Troubleshooting 				
Electrical: <ul style="list-style-type: none"> • Electrical and Electronic Systems • Motor Controls • Electrical Control Circuits 				

6. Fill out the “Related Instruction” section of the document with all courses you will be providing, including the course description, credit/non-credit, and hours spent on competency columns. Do NOT fill out the “On-The-Job Training” section of the form. (see below)

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	Course	Course Description	Credit/Non-Credit	Hours Spent on Competency
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<ul style="list-style-type: none"> • Motor Controls • PLC Systems • Hydraulic Systems • Drivers • Schematics 				
Mechanical:				
<ul style="list-style-type: none"> • Basic Machining • Hand Tools • Fluid Power • Power Transmission • Blueprint Reading • Troubleshooting 				
Electrical:				
<ul style="list-style-type: none"> • Electrical and Electronic Systems • Motor Controls • Electrical Control Circuits • “Outlet to Machines” • Blueprint Reading • Schematics • Troubleshooting 				
<i>On-The-Job Training is the work experience and instruction. Training experience need not be in the exact order as listed below.</i>				
	Trainer/Instructor	Name of person responsible for verifying competency mastery	Hours spent on competency	
Assemble machines				

7. Send in the completed form to Janell.Westveer@state.mn.us
8. A response email from the PIPELINE Project team will explain if any further action is needed
9. If you have any questions during the process of mapping out your related instruction competencies, please Contact Janell Westveer at (651) 284-5890 or Janell.Westveer@state.mn.us